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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,814

01/07/2005

Shozaburo Kameda

KWM-0015

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02/09/2006

RADER FISHMAN & GRAUER PLLC  
LION BUILDING  
1233 20TH STREET N.W., SUITE 501  
WASHINGTON, DC 20036

EXAMINER

ALEMU, EPHREM

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/520,814

Applicant(s)

KAMEDA ET AL.

Examiner

Ephrem Alemu

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2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
Hoanganh Le  
Primary Examiner

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-07-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: English translation of Japan Patent No. 2001-094336.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Toschiichi et al. (JP 2001-094336), submitted by applicants’.

Re claims 1-3 and 10, Toschiichi discloses an antenna with built-in filter (Figs. 4, 5) comprising:

a laminated dielectric block (i.e., base 11) that is formed such that dielectric sheets each having a conductive film formed on one surface are laminated so as to constitute at least one filter Figs. 3, 4; paragraph [0020];

a radiation element (12) fixedly provided at the laminated dielectric block and electrically connected to one electrode of the filter (Figs. 1, 4, 5; paragraphs [0009]; [0010]; [0020]; and

a feeding terminal electrode (i.e., electrode formed adjacent to conductor 13) electrically connected to the other electrode (16) of the filter (32) and provided at the outer face (i.e., bottom face) of the laminated dielectric block (i.e., base 11),

wherein the feeding terminal electrode (i.e., electrode formed adjacent to conductor 13) is provided on a mounting face that is a face opposing to a circuit board (i.e., conductor 13) when the laminated dielectric block is mounted on the circuit board and a connecting wiring (not

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labeled) for connecting the other electrode (16) of the filter (32) and the feeding terminal electrode (i.e., electrode formed adjacent to conductor 13) is not exposed to the outer face other than the mounting face of the laminated dielectric block (i.e., base 11) (Figs. 4, 5, 9; abstract; paragraphs [0032] – [0039]; wherein the electrical connection between the other electrode (16) of the filter and the feeding terminal electrode (i.e., electrode formed adjacent to conductor 13) is performed through a via-contact composed of a conductor embedded into a contact hole provided on a dielectric sheet; and wherein the via-contact is divided into two or more via-contacts at a different position on a plane view position of the dielectric block, and the two or more via-contacts are connected through a wiring provided on a dielectric sheet that constitute the dielectric block).

Re claims 4, Toschiichi, in Fig. 5, further shows the via-contact is formed into a band shape by embedding the conductor into a slender and groove-like contact hole provided on a dielectric sheet so as to increase the cross section of the via-contact.

Re claim 5, Toschiichi's antenna with built-in filter as shown in Fig. 5 inherently comprises a filter group including at least two of a low-pass filter, a high-pass filter and a band elimination filter.

Re claims 6-8, Toschiichi further discloses the radiation element is formed so as to be capable of receiving or transmitting two or more frequency bands, and two or more filters are formed so as to be capable of receiving or transmitting signals of the two or more frequency bands (Figs. 4, 5; abstract; paragraphs [0032] – [0039]).

***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toschiichi et al. (JP 2001-094336) in view of Arai et al. (US 6,542,050).

Re claim 9, Toschiichi discloses all the claimed subject matter except providing a shielding wall in a vertical direction between two or more filters by forming the shielding wall by a band-like via-contact provided in the dielectric sheets.

Arai discloses of providing a shielding wall in a vertical direction between two or more filters by a band-like via-contact provided in the dielectric sheets as taught by Arai for the purpose of providing adequate separation between the transmission signals and reception signals (Fig. 2; Col. 1, line 50- Col. 2, line 23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the antenna with built-in filter of Toschiichi's by providing a shielding wall in a vertical direction between two or more filters by a band-like via-contact provided in the dielectric sheets for the purpose of providing adequate separation between the transmission signals and reception signals

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Horie et al. (US Pub. 2004/0070538) ; Fukuda et al. (US 6,911,942) ; Nallo et al. (US 6,762,723); Ishizaki et al. (US 6,456,172); teach similar inventive subject matter.

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*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EA  
02-06-06



Hoanganh Le  
Primary Examiner